

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claims 1-17. (canceled)

Claim 18. (previously presented) An arrangement for cooling an electronic assembly, the arrangement comprising:

a circuit board having a first surface, a second surface, and at least a first heat-generating element secured to the first surface, the circuit board further comprising at least one aperture extending between the first surface and the second surface;

an enclosure member secured to said circuit board so as to form a fluid tight barrier of a compartment defined at least in part by said enclosure member and said circuit board, said compartment including a first subcompartment defined at least in part by said first surface and said enclosure member and a second subcompartment defined at least in part by said second surface and said enclosure member;

a liquid disposed within said compartment;
at least one electromechanical actuator secured within the compartment, the electromechanical actuator operable to generate a flow movement of the liquid in the direction of the at least one aperture, the at least one mechanical actuator including a

substantially rigid blade coupled to a piezoelectric actuator and extending in a first direction from the piezoelectric actuator, the piezoelectric actuator coupled proximate the at least one aperture; and

a flapper valve having a first end secured within the second subcompartment proximate the at least one aperture and a second end movably coupled to the first end, the second end movable to alternately allow fluid flow through the first aperture and inhibit fluid flow through the first aperture.

Claim 19. (original) The arrangement of claim 18 wherein the circuit board includes an external portion that extends outward of the compartment.

Claim 20. (previously presented) The apparatus of claim 18 wherein the circuit board includes a top end portion and a bottom end portion, and wherein the top end portion includes at least one aperture extending between the first surface and the second surface and the bottom end portion.

Claims 21-26. (canceled)

Claim 27. (withdrawn) The apparatus of claim 18 wherein the enclosure includes a plurality of cooling fins configured to convey heat from a fluid disposed within the compartment to an external environment.

Claim 28. (new) The apparatus of claim 19 wherein the enclosure includes a plurality of cooling fins configured to convey heat from a fluid disposed within the compartment to an external environment.

Claim 29. (withdrawn) The apparatus of claim 20 wherein the enclosure includes a plurality of cooling fins configured to convey heat from a fluid disposed within the compartment to an external environment.

Claim 30. (new) The arrangement of claim 20 wherein the circuit board includes an external portion that extends outward of the compartment.

Claim 31. (new) The apparatus of claim 30 wherein the enclosure includes a plurality of cooling fins configured to convey heat from a fluid disposed within the compartment to an external environment.